

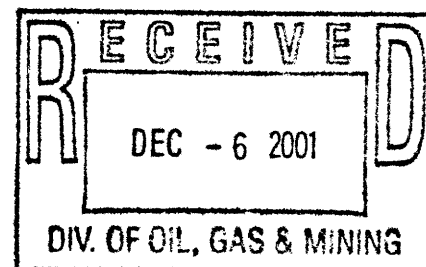
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J.
M/35/002
-NRDC

Kennecott

December 6, 2001

Mr. D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program
Utah Division of Oil Gas and Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84114-5801



Re: Additional Response Comments, Kennecott Utah Copper Corporation, Groundwater Extraction and Treatment Remedial Project, Bingham Mine, M/035/002, Salt Lake County, Utah

Dear Mr. Hedberg:

Kennecott appreciates the Division's effort to communicate and document issues to develop a common understanding of this complex project. The following responses are provided in response to your letter of October 5, 2001, regarding the above project. The Division's responses from October 5, are now in bold italic font. Kennecott's latest responses follow in bold font.

- 9) *Section 5.4 Water Treatment Plants, page 12: The Zone-A treatment plant and associated pipelines will be built on ground owned by KUCC. The facility will need to be included in the DOGM reclamation bond for the Bingham Canyon Mine.*

KUCC Response:

There are several reasons why the Zone A treatment plant and associated pipelines should not need to be included in DOGM permitting and bonding. The Zone A RO plant serves a dual purpose, - both to meet the objectives of the NRD and to complete part of the CERCLA remediation (containing the plume). To the extent that any of these facilities are located on-site and are part of a CERCLA remedy, they are exempt from federal and state permitting requirements pursuant to CERCLA section 121(e)(1), which provides: "*No Federal, State, or local permit shall be required for the portion of any removal or remedial action conducted entirely onsite, where such remedial action is selected and carried out in compliance with this section.*"

Additionally, the RO water treatment to make municipal quality water is not a "mining operation" as that term is defined in UCA 40-8-4(8) which states, "*mining operation means those activities conducted on the surface of the land for the exploration for, development of, or extraction of a mineral deposit, including, but not limited to, surface mining and the surface effects of underground and in situ mining, on-site transportation, concentrating, milling evaporation, and other primary processing.*" Nevertheless, the Zone A reverse osmosis treatment plant already meets the objectives of the mined land reclamation act which is "*to return the land ... to a stable ecological condition compatible with past, present, and probable future local land uses.*" Utah Code Ann. 40-8-12. The RO treatment plant, including building

and skids and the pipeline that will take drinking water to the JWCD's Zone C Reservoir, are intended to be transferred to the JWCD at a future date to continue providing water to the Jordan Valley residents long into the future. There is no question that providing drinking water to the public is consistent with local land uses.

DOGM determines this response does not provide for any specific long term maintenance and reclamation assurances from JWCD. The Division requests this confirmation in the form of a letter from JWCD.

Kennecott and JWCD are currently drafting a joint agreement to address the long-term funding for the operation and maintenance of this water treatment facility. The exact value of the operation and maintenance fund will be determined after Kennecott constructs and operates the facility prior to turning it over to JWCD. Currently it is estimated that the perpetual operations and maintenance fund value is approximately \$16 million. The ultimate agreement will be part of the overall joint proposal package to be approved by the NRD Trustee.

- 15) *Section 5.6 Concentrate Disposal, pages 14 – 17: The greater flow of tailings slurry, which is anticipated to stabilize the corrosive and precipitating nature of the concentrate streams, will only be present during active mining operations. The scenario of the concentrate streams and post mining flow in the tailings line should also be discussed.*

KUCC Response:

As noted in response to comment No. 13, the RD will include a study of various treatment and concentrate disposal options for the post-mining period.

Disposal of concentrates into the KUCC tailings impoundment is also subject to regulation by DOGM under the Minerals Rules of the Utah Mined Land Reclamation Act, under permit number M/035/015. The impacts of concentrate disposal in this facility (during active mining and after mine closure) on the currently approved reclamation plan will need to be discussed and the reclamation plan amended, as needed.

KUCC Response:

A study that addresses short and long-term geochemical impacts on the tailings system is included in the RD. Additionally, KUCC's continual acidification research and operational monitoring as required under permit M/035/015 and Groundwater Discharge Permit UGW350011 allow for monitoring of variations in the chemistry of tailings inflows. The current reclamation surety estimate for the tailings impoundment includes the surface application of approximately 50 tons per acre of limestone equivalent to 35% of the embankment surface. Should the continual research demonstrate that long-term erosional and vegetative stability of the tailings embankment is improved or hampered by the disposal of concentrates into the tailings impoundment and an adjustment in tailings surface treatment is required, an amendment to the approved mining and reclamation plan and adjustment to surety estimate would occur.

DOGM considers this response to be inadequate given that the studies identified don't necessarily address all the bonding and permitting concerns at this point in time. Please provide more detail regarding the timing for implementation of those studies identified in the Remedial Design Work Plan for Geochemical Investigations: Tailings Disposal System. The Division realizes that all the geochemical answers are not available at this time and the Division is willing to be somewhat flexible in regards to

addressing those timeframes. It is understood that the possible liming of the embankments was included in the impoundment bond estimate, but this liming was not necessarily to the internal surface areas of the impoundment. Therefore, an assessment of the long-term effects / impacts to final reclamation success of the internal impoundment areas is also necessary.

Kennecott's intent is that the groundwater remediation project will not have a negative affect on the closure and reclamation success of the tailings impoundment and the end of mine life. Part of the purpose of the geochemical evaluations is to determine if there will be any long-term negative effects on the impoundment such that adjustments can be made to the remediation program that will minimize or eliminate reclamation failures related to water treatment activities. Conceptually, if the remediation program does not substantially change the neutralization potential of the tailings, no negative effects to the long term reclamation of the impoundment will be realized and increasing the bonding established in the current permit should be moot.

21) *Section 13.4 KUCC/JVWCD Agreement ("the Project Agreement"), pages 44 – 45: Please explain if, when ownership of the Zone-A plant and associated waste stream pipelines is passed to JVWCD, the DOGM bonding responsibilities for those facilities will be transferred also.*

KUCC Response:

As indicated in the response to item #9, the Zone A plant is 1) part of a CERCLA remedy, and 2) is a treatment facility that will provide culinary water to the public post-mining and as such does not fall under the definition of a "mining operation" subject to DOGM reclamation and bonding requirements. Therefore KUCC does not intend to post a reclamation bond for the facility and thus no such bonding responsibilities would be transferred to the JVWCD.

DOGM considers this response to be partially acceptable. Once DOGM receives a letter from JVWCD clarifying long term responsibility regarding the maintenance and liability of this treatment facility, we are willing to accept this response as adequate.

As noted in the latest Kennecott response to No. 9 above, Kennecott and JVWCD are finalizing an agreement that details the financial aspects associated with transferring the Zone A RO plant to JVWCD operations. Kennecott, the JVWCD and the State of Utah NRD Trustee also have developed a proposed agreement for the obligations associated with providing municipal quality water and the financial issues associated with the NRD trust fund.

22) *Section 14.1 Zone A 4th paragraph, page 46: Please explain in this section where the lime-treatment sludge from the Zone A RO plant will be disposed of after mine closure.*

KUCC Response:

Should it be necessary to condition the water to adjust the pH for treatment, KUCC will characterize and identify appropriate disposal options.

DOGM asks KUCC how this characterization will take place and how the disposal sites will be chosen. What criteria will be used. It is still DOGM's position that the disposal site(s) will need to be permitted.

No determination has been made at this time as to the post mining disposition of water treatment plant sludges generated from the lime treatment of acidic waters at Kennecott. That is why a preliminary post closure water management plan is scheduled to be produced as part of the final remedial design. That plan will contain the details regarding how sludge characterization will take place and how disposal sites will be chosen. As that plan evolves and closure approaches, Kennecott will work closely with the Division to resolve these issues. This is the purpose of the Technical Review Committee of which the Division is a part.

- 25) *Section 16.0 Meeting USEPA CERCLA Requirements, pages 51 – 55: Construction of a lined facility for concentrate disposal within a KUCC mine permit area would require a modification to the currently approved mine permit(s) with DOGM. This modification would be subject to DOGM review under the appropriate section(s) of the Minerals Rules.*

KUCC Response:

Permitting requirements, if any, will be reviewed for any option chosen for NF concentrate disposal. The Remedial Design Work Plan includes a permit analysis. However, it is KUCC's view that construction of such a repository would be part of a CERCLA remedial action. To the extent that such facilities are located on-site and are part of a CERCLA remedy, they are exempt from federal and state permitting requirements pursuant to CERCLA section 121(e)(1), which provides: "No Federal, State, or local; permit shall be required for the portion of any removal or remedial action conducted entirely on-site, where such remedial action is selected and carried out in compliance with this section."

DOGM considers this response to be inadequate since the Division considers Kennecott to be responsible for the site, if necessary, and also considers permitting of this disposal site appropriate.

See response to No. 22 above.

- 26) *Section 16.0 Meeting USEPA CERCLA Requirements, pages 51 – 55: After mining ceases and the water treatment facilities continue to produce concentrates, please explain if the RO/NF concentrates will still be considered a byproduct of the former mining practices and therefore not subject to discharge limitations.*

KUCC Response:

KUCC assumes that the treatment concentrates will be subject to whatever discharge limits are applicable. To the extent that treatment concentrates will be disposed in the tailings impoundment, discharges from the impoundment will need to meet the applicable UPDES permit requirements. If the concentrate stream from the RO plant is permitted for direct discharge to the Great Salt Lake, it would be subject to the applicable discharge limits under the respective UPDES permit.

RO/NF is subject to ore mining and dressing when being discharged with mine-related discharges. With respect to UPDES discharges, it appears that post-closure discharges would not be subject to the ore mining and dressing limitations, which pertain to active mining operations. While the post-mining RO/NF concentrate discharges to jurisdictional waters of the State would not be subject to the ore mining and dressing effluent limitation guidelines in 40 CFR Part 440, any such discharge would be subject to other applicable limitations consistent with the relevant permitting program.

DOGM considers this response inadequate until the responsibility of the impact from the concentrate streams are fully understood in relationship to permitted mine facilities (i.e. the tailings impoundment).

See response to No.15 above.

If you have any questions regarding this response please contact me at 569-7128.

Sincerely,

A handwritten signature in black ink, appearing to read "Jon Cherry", is written over the typed name.

Jon Cherry, P.E.
Senior Project Engineer

cc: Doug Bacon, DEQ
Rich Borden
Paula Doughty KUCC
Eva Hoffman EPA